

62



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/912,388	07/26/2001	Takao Kawasaki	040679-1315	8034

7590 12/16/2002

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EXAMINER

CORRIGAN, JAIME W

ART UNIT	PAPER NUMBER
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3748

DATE MAILED: 12/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/912,388

Applicant(s)

KAWASAKI ET AL.

Examiner

Jaime W Corrigan

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 19-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19,37,38,40,42,44-46,48 and 49 is/are rejected.
- 7) ☒ Claim(s) 20-36,39,41,43 and 47 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2, 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This Office Action is in response to an Amendment filed on October 3, 2002. Claims 1-18 have been cancelled. Overall, claims 19-49 are pending in this application. The arguments with respect to the references applied in the first Office Action were deemed persuasive, however, a new non-final rejection is set forth below.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 19, 37-38, 40, 42, 44-46, 48-49 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohkawa et al. (PN 5,494,008).

Regarding claims 19, 42, 48 Ohkawa discloses means for collecting information (See Figure 4) on an exhaust valve closing timing (See Figure 4 (77)), an intake valve opening timing (See Figure 4 (77)) and an engine speed (See Figure 4 (76)) of the engine; and means for calculating an estimated internal EGR quantity (See Abstract Lines 1-12) of the engine in accordance with the exhaust valve closing timing (See Abstract Lines 1-12, Column 2 Lines 39-47, Column 12 Lines 27-37), the intake valve opening timing (See Abstract Lines 1-12, Column 2 Lines 39-47, Column 12 Lines 27-37) and the engine speed (See Abstract Lines 1-12).

Regarding claims 37, 44 Ohkawa discloses controlling the engine in accordance with the estimated internal EGR quantity (See Abstract Lines 1-12, Column 2 Lines 39-47).

Regarding claim 38, 45 Ohkawa discloses the method is an engine ignition timing control method, and ignition timing of the engine is controlled in accordance with the estimated internal EGR quantity (See Column 7 Lines 63-67, Column 8 Lines 1-11).

Regarding claim 40, 46 Ohkawa discloses the method is an engine valve timing control method, and an intake valve closing timing of the engine is controlled in accordance with the estimated internal EGR quantity (See Abstract Lines 1-12, Column 2 Lines 39-47, Column 12 Lines 27-37).

Regarding claim 49 Ohkawa discloses means for controlling an engine operating parameter of the engine in accordance with the estimated internal EGR quantity (See Abstract Lines 1-12, Column 2 Lines 39-47, Column 12 Lines 27-37, 57-62).

***Allowable Subject Matter***

Claims 20-36, 39, 41, 43, 47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

Applicant's arguments with respect to claims 19-20, 34, 37, 42-44, 48-49 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

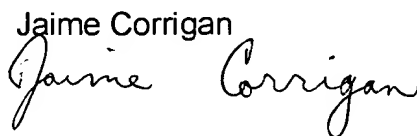
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yasuhara (PN 4,432,331), Machida (PN 5,632,257), Reuschenbach (PN 5,6325,634) disclose similar engine control systems.

Any inquiry concerning this communication from the examiner should be directed to Examiner Jaime Corrigan whose telephone number is (703) 308-2639. The examiner can normally be reached on Monday - Friday from 8:30 a.m. – 6:00 p.m. 2<sup>nd</sup> Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (703) 308-2623. The fax number for this group is (703) 308-7763.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

JC

Jaime Corrigan  


Application/Control Number: 09/912,388  
Art Unit: 3748

Page 5

December 9, 2002

Patent Examiner

Art Unit 3748

A handwritten signature in black ink, appearing to read 'T. Denion', with a stylized flourish at the end.

THOMAS DENION  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700